

**Abstract**

Analysis of a semiconductor die having silicon-on-insulator (SOI) structure is enhanced by accessing the circuitry within the die from the back side without necessarily breaching or needing to breach the thin insulator layer of the SOI structure. According to  
5 an example embodiment of the present invention, a portion of substrate is removed from the back side of a semiconductor die having a SOI structure and a backside opposite circuitry in a circuit side. An exposed region is formed where the substrate has been removed. A detectable response from the exposed region is induced, for example, by an electron beam, as a function of a portion of the active circuitry within the die.